

Serial Number: 10/003,196

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;
☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted **ending** stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____

ENTERED

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.



OIPE

RAW SEQUENCE LISTING

DATE: 03/13/2002

PATENT APPLICATION: US/10/003,496

TIME: 10:30:07

Input Set : A:\PTO_MS.txt

Output Set: N:\CRF3\03132002\J003496.raw

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3 <110> APPLICANT: Maxygen ApS
4   Maxygen Holdings Ltd.
6 <120> TITLE OF INVENTION: Single-Chain Polypeptides
8 <130> FILE REFERENCE: 0218us210
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/003,496
C--> 10 <141> CURRENT FILING DATE: 2002-01-31
10 <150> PRIOR APPLICATION NUMBER: US 60/245,727
11 <151> PRIOR FILING DATE: 2000-11-02
13 <160> NUMBER OF SEQ ID NOS: 16
15 <170> SOFTWARE: PatentIn version 3.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 174
19 <212> TYPE: PRT
20 <213> ORGANISM: Homo sapiens
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28 Cys Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln
29          20          25          30
32 Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Leu Val
33          35          40          45
36 Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys
37          50          55          60
40 Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser
41 65          70          75          80
44 Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser
45          85          90          95
48 Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp
49          100         105         110
52 Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro
53          115         120         125
56 Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe
57          130         135         140
60 Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe
61 145         150         155         160
64 Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
65          165          170
68 <210> SEQ ID NO: 2
69 <211> LENGTH: 63
70 <212> TYPE: DNA
71 <213> ORGANISM: Saccharomyces cerevisiae
73 <400> SEQUENCE: 2
74 atgaaattga aaactgttag atctgctgtt ttgtcttctt tgtttgcttc tcaagttttg
60

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76 ggt 63
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85 <223> OTHER INFORMATION: leader sequence
87 <400> SEQUENCE: 3
88 caaccaattg atgatactga atctcaaaact acttctgtta atttgatggc tgatgatact 60
90 gaatctgctt ttgctactca aactaattct ggtggtttgg atgttgttgg ttgatatacg 120
92 atggcc 126
95 <210> SEQ ID NO: 4
96 <211> LENGTH: 522
97 <212> TYPE: DNA
98 <213> ORGANISM: Artificial Sequence
100 <220> FEATURE:
101 <223> OTHER INFORMATION: DNA encoding G-CSF copy 1 in the single chain G-CSF dimer
103 <400> SEQUENCE: 4
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106 gttagaaaaa ttcaagggtga tgggtctgct ttgcaagaaa aattgtgtgc tacttataaa 120
108 ttgtgtcatc cagaagaatt ggttttgttg ggtcattctt tgggtattcc atgggctcca 180
110 ttgtcttctt gtccatctca agctttgcaa ttggctgggt gtttgtctca attgcattct 240
112 ggtttgtttt tgtatcaagg ttgtttgcaa gctttggaag gtatttctcc agaattgggt 300
114 ccaactttgg atactttgca attggatggt gctgattttg ctactactat ttggcaacaa 360
116 atggaagaat tgggtatggc tccagctttg caaccaactc aagggtgctat gccagctttt 420
118 gcttctgctt ttcaaagaag agctgggtgg gttttgggtt cttctcattt gcaatctttt 480
120 ttggaagttt cttatagagt ttgagacat ttggtcaac ca 522
123 <210> SEQ ID NO: 5
124 <211> LENGTH: 531
125 <212> TYPE: DNA
126 <213> ORGANISM: Artificial Sequence
128 <220> FEATURE:
129 <223> OTHER INFORMATION: DNA encoding G-CSF copy 2 in the single chain G-CSF dimer
131 <400> SEQUENCE: 5
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134 gtgcgtaaaa tccagggcga tggcgcggcc ctgcaggaaa aactgtgcgc gacctataaa 120
136 ctgtgccatc ctgaagaact ggtcctgtta ggccatagct taggcatccc gtgggcgcct 180
138 ctgagtagct gcccgagtca ggccctgcag ctggccgggt gcctgagtca gttacatagt 240
140 ggcttatttt tatatcaggg cttactgcag gcgttagaag gcattagtcc ggaactgggc 300
142 ccgaccctgg ataccttaca gttagatgtc gcggattttg ccaccaccat ttggcagcag 360
144 atggaagaat taggcatggc gcctgcgtta cagcctaccc agggcgccat gcctgcgttt 420
146 gcgagtgcgt ttcagcgtcg cgcggcgggc gtgttagtggt ccagccatct gcagagcttt 480
148 ctggaagtga gttatcgtgt gttacgccat ctggcccagc cttaattctag a 531
151 <210> SEQ ID NO: 6
152 <211> LENGTH: 348
153 <212> TYPE: PRT
154 <213> ORGANISM: Artificial Sequence
156 <220> FEATURE:
157 <223> OTHER INFORMATION: Single chain G-CSF dimer polypeptide

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162 1 5 10 15
165 Cys Leu Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln
166 20 25 30
169 Glu Lys Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val
170 35 40 45
173 Leu Leu Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys
174 50 55 60
177 Pro Ser Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser
178 65 70 75 80
181 Gly Leu Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser
182 85 90 95
185 Pro Glu Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp
186 100 105 110
189 Phe Ala Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro
190 115 120 125
193 Ala Leu Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe
194 130 135 140
197 Gln Arg Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe
198 145 150 155 160
201 Leu Glu Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro Thr Pro
202 165 170 175
205 Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
206 180 185 190
209 Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
210 195 200 205
213 Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu
214 210 215 220
217 Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser
218 225 230 235 240
221 Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu
222 245 250 255
225 Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu
226 260 265 270
229 Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala
230 275 280 285
233 Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu
234 290 295 300
237 Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg
238 305 310 315 320
241 Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu
242 325 330 335
245 Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
246 340 345
249 <210> SEQ ID NO: 7
250 <211> LENGTH: 90
251 <212> TYPE: DNA
252 <213> ORGANISM: Homo sapiens

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Input Set : A:\PTO_MS.txt

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254 <400> SEQUENCE: 7
255 atggctggac ctgccaccca gagcccatg aagctgatgg ccctgcagct gctgctgtgg      60
257 cacagtgcac tctggacagt gcaggaagcc                                     90
260 <210> SEQ ID NO: 8
261 <211> LENGTH: 522
262 <212> TYPE: DNA
263 <213> ORGANISM: Artificial Sequence
265 <220> FEATURE:
266 <223> OTHER INFORMATION: DNA encoding single-chain G-CSF copy 1 (codon usage
optimized for
267      expression in CHO cells)
269 <400> SEQUENCE: 8
270 actccattgg gtccagcttc ttctttgcca caatcttttt tgttgaaatg tttggaacaa      60
272 gttagaaaaa ttcaaggtag tgggtctgct ttgcaagaaa aattgtgtgc tacttataaa      120
274 ttgtgtcatc cagaagaatt ggttttgttg ggctattctt tgggtattcc atgggctcca      180
276 ttgtcttctt gtccatctca agctttgcaa ttggctgggt gtttgtctca attgcattct      240
278 ggtttgtttt tgtatcaagg tttgttgcaa gctttggaag gtatttctcc agaattgggt      300
280 ccaactttgg atactttgca attggatggt gctgattttg ctactactat ttggcaacaa      360
282 atggaagaat tgggtatggc tccagctttg caaccaactc aagggtgctat gccagctttt      420
284 gcttctgctt ttcaaagaag agctggtggt gttttggttg cttctcattt gcaatctttt      480
286 ttggaagttt cttatagagt tttgagacat ttggctcaac ca                    522
289 <210> SEQ ID NO: 9
290 <211> LENGTH: 6
291 <212> TYPE: PRT
292 <213> ORGANISM: Artificial Sequence
294 <220> FEATURE:
295 <223> OTHER INFORMATION: tag
297 <400> SEQUENCE: 9
299 His His His His His His
300 1      5
303 <210> SEQ ID NO: 10
304 <211> LENGTH: 8
305 <212> TYPE: PRT
306 <213> ORGANISM: Artificial Sequence
308 <220> FEATURE:
309 <223> OTHER INFORMATION: tag
311 <400> SEQUENCE: 10
313 Met Lys His His His His His His
314 1      5
317 <210> SEQ ID NO: 11
318 <211> LENGTH: 10
319 <212> TYPE: PRT
320 <213> ORGANISM: Artificial Sequence
322 <220> FEATURE:
323 <223> OTHER INFORMATION: tag
325 <400> SEQUENCE: 11
327 Met Lys His His Ala His His Gln His His
328 1      5      10
331 <210> SEQ ID NO: 12
332 <211> LENGTH: 14

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333 <212> TYPE: PRT
334 <213> ORGANISM: Artificial Sequence
336 <220> FEATURE:
337 <223> OTHER INFORMATION: tag
339 <400> SEQUENCE: 12
341 Met Lys His Gln His Gln His Gln His Gln His Gln His Gln
342 1          5          10
345 <210> SEQ ID NO: 13
346 <211> LENGTH: 15
347 <212> TYPE: PRT
348 <213> ORGANISM: Artificial Sequence
350 <220> FEATURE:
351 <223> OTHER INFORMATION: tag
353 <400> SEQUENCE: 13
355 Met Lys His Gln His Gln His Gln His Gln His Gln His Gln Gln
356 1          5          10          15
359 <210> SEQ ID NO: 14
360 <211> LENGTH: 10
361 <212> TYPE: PRT
362 <213> ORGANISM: Artificial Sequence
364 <220> FEATURE:
365 <223> OTHER INFORMATION: tag
367 <400> SEQUENCE: 14
369 Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu
370 1          5          10
373 <210> SEQ ID NO: 15
374 <211> LENGTH: 8
375 <212> TYPE: PRT
376 <213> ORGANISM: Artificial Sequence
378 <220> FEATURE:
379 <223> OTHER INFORMATION: tag
381 <400> SEQUENCE: 15
383 Asp Tyr Lys Asp Asp Asp Asp Lys
384 1          5
387 <210> SEQ ID NO: 16
388 <211> LENGTH: 9
389 <212> TYPE: PRT
390 <213> ORGANISM: Artificial Sequence
392 <220> FEATURE:
393 <223> OTHER INFORMATION: tag
395 <400> SEQUENCE: 16
397 Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
398 1          5

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/003,496

DATE: 03/13/2002

TIME: 10:30:08

Input Set : A:\PTO_MS.txt

Output Set: N:\CRF3\03132002\J003496.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No

L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date